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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,596	10/19/2000	Lily Barkovic Mummert	YOR920000461-US1	8300

7590 06/05/2009

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EXAMINER	
TODD, GREGORY G	

ART UNIT	PAPER NUMBER
2457	

MAIL DATE	DELIVERY MODE
06/05/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/692,596	MUMMERT ET AL.	
	Examiner	Art Unit	
	GREGORY G. TODD	2457	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,6-13,15-18 and 21-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4,6-13,15-18 and 21-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This office action is in response to applicant's amendment filed, 02 February 2009, of application filed, with the above serial number, on 19 October 2000 in which claims 1, 4, 6-8, 10, 12, 13, 15-17, and 21-26 have been amended. Claims 1, 4, 6-13, 15-18, and 21-26 are pending in the application.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: *Existing* workload (units) does not have antecedent basis.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 25 recites the limitation "the key planning date" in line 16. There is insufficient antecedent basis for this limitation in the claim.

Claims 1, 10, 12, and 21-26 recite the limitation "the existing workload" in line 19 (claim 1, for example). There is insufficient antecedent basis for this limitation in the claim.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 4, 6-13, 15-18, and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yang et al (hereinafter “Yang”, 6,542,854) in view of Chen et al (hereinafter "Chen”, 5,819,083), and further in view of Miller (hereinafter "Miller”, 5,408,663).

As per Claim 1, Yang teaches a method for evaluating and distributing workload across a processing environment having a plurality of computer systems each having a plurality of assigned existing workload units comprising the steps of:

calculating a plurality of impact values, one impact value for each existing workload unit assigned for each of a plurality of computing systems, wherein said calculating of each impact value comprises determining a change in system expiration date should an existing workload unit be removed from the system (at least col. 5 line 1 - col. 6 line 19; CAE/UFW/CAW using workload definition information for sizing/ cost purposes); and

determining the impact of moving the existing workload from a donor computer system to a recipient computer system based on said impact values (at least col. 33, lines 30-62; evaluating systems for suitable operation of workload).

Yang fails to explicitly teach a processing environment each computer system having a plurality of assigned existing workload units and reassigning the existing workload in the processing environment to change expiration dates of at least two of said plurality of computer systems. However, the use and advantages for using such a system is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Chen. Chen teaches a parallel database system comprised of a plurality of computer systems wherein as data becomes too large on existing systems, new nodes are added and data on existing nodes can be redistributed to the new nodes, thereby resulting in change is expiration date of the existing node and the new node (at least col. 4:56-61; 6:3-32). Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to incorporate the use of Chen's system into Yang's system as Yang teaches a plurality of user stations running the programs over a LAN (at least col. 33 line 64 – col. 34 line 6; col. 35 line 51 – col. 36 line 9) as well as selecting different CPU's to operate on a workload if it results in over 100% utilization (col. 5:1-10), and thus with Chen, it would be obvious the capacity planning of Yang as workload becomes too much for a single CPU, to similarly use Chen's redistribution of workload as workload becomes too much for existing nodes.

Yang and Chen fail to teach calculating an impact number representing the number of days that the expiration date of the computer system would be changed with all other workload units remaining the same. However, the use and advantages for using such a system is well known to one skilled in the art at the time the invention was made as evidenced by the teachings of Miller. Miller teaches system task scheduling wherein tasks are given effort requirements (in hours/days/etc) to complete such tasks/workloads are inputted into a model and resource availability according to such schedule is calculated accordingly (at least col. 9:3-68). All of the component parts are known in Yang, Chen and Miller. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, as all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results.

As per Claim 4. The method of Claim 1 further comprising sorting said existing workload units based on said impact values into a sorted impact list (at least col. 26 line 45 - col. 27 line 5).

As per Claim 6. The method of Claim 1 further comprising comparing the expiration date of each of said plurality of computing systems to at least one target service date for servicing each of said plurality of computing systems (at least col. 33, lines 30-62).

As per Claim 7. The method of Claim 6 further comprising altering the existing workload in the processing environment to change the expiration date relative to the

target service date for at least two of said plurality of computer systems (at least col. 25, lines 13-20).

As per Claim 8. The method of Claim 6 further comprising the steps of:

creating a From list of computer systems for which the expiration date precedes the at least one service date;

creating a To list of computer systems for which the expiration date is later than said at least one service date; and

reassigning existing workload units from computer systems on said From list to computer systems on said To list based on said impact values (at least col. 6, lines 9-36; transferable workload for capacity planning).

As per Claim 9. The method of Claim 8 further comprising calculating new expiration dates for computer systems on said From and said To lists after said reassigning (at least col. 5 line 1 - col. 6 line 36).

As per Claim 11. The apparatus of Claim 10 further comprising at least one storage location accessible by the administrative processor for storing data relating to said plurality of computer systems (at least Fig. 7).

Claims 10 and 12-26 do not add or define any additional limitations over claims 1-9 and 11 and therefore are rejected for similar reasons.

Response to Arguments

6. Applicant's arguments filed 02 February 2009 have been fully considered but they are not persuasive.

To expand on the objection to the specification: Applicant has referred to page 15 line 25 "current location of a workload" and page 18 lines 12-13 "a table of the workload that currently uses system s". As can be seen, there is no antecedent basis for the term 'existing'. It is not clear as to the scope of the term. As per the Interview of 21 August 2008 when said term was discussed, the Examiner was under the impression that an existing workload would be one that was currently being processed. However, according to a standard definition of "workload**:** 1 : the amount of work or of working time expected or assigned <students with a heavy *workload*>, 2 **:** the amount of work performed or capable of being performed (as by a mechanical device) usually within a specific period"; as well as the specification definitions of workload and workload unit (see p. 8), 'workload units…act as a means to allocate workload to a specific processing system', it is clear that a workload unit is a unit of work to be performed in the future, and thus planned for. As such, it is not clear how an existing workload unit would differ from an assigned workload unit, with the amended claims further exemplifying such, citing 'assigned existing workload units' (see claim 1 line 4).

Applicant argues Yang does not teach the claims as amended, including calculating a plurality of impact values, one impact value for each existing workload unit assigned for each of a plurality of computing systems. Assuming the specification does support the existing workload units terminology and that such units existing would be currently in a process queue (as the specification does not detail how a process being processed is moved or reassigned, the process must be in a queue or the like), Yang teaches said limitations. While Yang primarily is concerned with system capacity

planning in order to avoid future capacity issues, Yang teaches in multiple instances that such workloads are anticipated, but also that they are current and actual. For instance, Yang teaches sizing the system “with respect to the anticipated or actual “workload” that is to be performed by a software application (col. 3:59-61), the actual workload to be performed. Yang teaches workload information is obtained by collecting “a running instance of a workload" (col. 6 line 22). Yang teaches “a workload is a set of actions that **is performed** by the software application" (col. 5:29-30), emphasis added, not a set of actions to be performed, but a set of actions actually performed. Yang then teaches workload analysis taking events into account (col. 7:31-37); wherein events are “added to the workload, or even preempt the **current workload**”, emphasis added. Thus, it can be seen that Yang’s system is applicable to predicting system capacity as well as current workload analysis to optimize the performance of a system.

With regard to Chen, Applicant argues Chen is directed to a system for storing data and not processing data and Applicant also notes that the previously cited passage of Chen states the selection is outside the scope of Chen's invention. First, to the latter, Chen states such, but then immediately explains the teachings of said articles which are outside Chen’s scope. Chen then clearly teaches such ‘buckets’ as containing workload, and the amount of workload in a bucket giving the bucket a value to assist in moving the bucket of workload from node to node (col. 6:21-28).

Applicants remaining arguments with respect to the dependent claims have been substantially responded to in previous Office Actions as well as the mapping to the references in the Rejections above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Newly cited Eilert et al (adjusting distributed work units to achieve common performance standard (eg. common expiration dates)), in addition to previously cited Caccavale, Minowa et al, Odhner et al, Quernemoen, Papaefstathiou, Abu Electronic Ata, MacFarlane et al, Chafe, Fong et al, Hartsell et al, Mummert et al, Flockhart et al, and Sanders et al, are cited for disclosing pertinent information related to the claimed invention. Applicants are requested to consider the prior art references for relevant teachings when responding to this office action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY G. TODD whose telephone number is (571)272-4011. The examiner can normally be reached on Monday - Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/G. G. T./

Examiner, Art Unit 2457

/ARIO ETIENNE/

Supervisory Patent Examiner, Art Unit 2457